

TECHNICAL DATA SHEET

Recombinant Human R-Spondin 3 (Carrier-free)

Catalog Number: 21-7128

RPx-Pro™ Recombinant Protein

PRODUCT INFORMATION

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Recombinant Human R-Spondin 3 (Carrier-free)

DESCRIPTION

R-Spondin 3 (RSPO3) is a secreted protein belonging to the R-Spondin family of four structurally related Wnt/beta-catenin signaling regulators. All four members contain one thrombospondin-like and two furin-like domains. Studies indicate that R-Spondin 3, prominently expressed in hematopoietic organs, acts as an angiogenic factor during embryogenesis. R-Spondins can enhance Wnt/beta-catenin signaling as they compete with the Wnt agonist DKK-1 for binding to Wnt co-receptors LRP6/Kremen. They can also act as a signaling activation ligand on LRP6 and LGR4 to form a cluster with WNT and FZD. The R-Spondins have been demonstrated to bind to LGR-4, LGR-5 and LGR-6 receptors with high affinity.

MOLECULAR MASS

Recombinant Human R-Spondin 3 is a 240 amino acid protein of 26.9 kDa, however due to glycosylation it migrates at about 37 kDa under reducing conditions.

AMINO ACID SEQUENCE

MHPNVSQGCG GGCATCSDYN GCLSCKPRLF FALERIGMKQ IGVCSSCPS GYYGTRYPDI NKCTKCKADC DTCFNKNFCT
KCKSGFYHL GKCLDNCEP LEANNHTMEC VSIVHCEVSE WNPWSPCTKK GKTGCFKRGT ETRVREIIQH PSAKGNLCP
TNETRKTQVQ RKKCQKGERG KKGREKRKK PNKGESKEAI PDSKSLESSK EIPEQRENKQ QKQKRKVQDK QKSVSVSTVH

SOURCE

CHO cells

APPLICATIONS

Bioassay

PURITY

95 %

STORAGE

-20°C

PROTEIN CONTENT

Verified by UV Spectroscopy and/or SDS-PAGE gel.

ENDOTOXIN LEVEL

Endotoxin level is <0.1 ng/µg of protein (<1 EU/µg).

AUTHENTICITY

Verified by N-terminal and Mass Spectrometry analyses (when applicable).

CROSS REACTIVITY

BIOACTIVITY

The expected ED₅₀ is 0.8-2.0 ug/ml, based on measuring the R-Spondin-3 enhancement of BMP-2-mediated differentiation of MC3T3-E1 cells.

RESEARCH AREAS

Cancer, Proliferation, Neurobiology

RECONSTITUTION

See Certificate of Analysis (COA) for lot specific reconstitution information.

REFERENCES

Jin YR and Yoon JK. 2012. Int J Biochem Cell Biol. 44(12): 2278-2287. Kim KA, Wagle M, Tran K, Zhan X, Dixon MA, Liu S, Gros D, Korver W, Yonkovich S, Tomasevic N, Binnerts M and Abo A. 2008. Mol Biol Cell. 19(6): 2588-2596. Carmon KS, Gong X, Lin Q, Thomas A and Liu Q. 2011. Proc Natl Acad Sci USA. 108(28): 11452-11457. Gong X, Carmon KS, Lin Q, Thomas A, Yi J and Liu Q. 2012. PLoS One. 7(5):e37137. DOI 10.1371/journal.pone.0037137. Kazanskaya O, Ohkawara B, Herault M, Wu W, Maltry N, Augustin HG and Niehrs C. 2008. Development. 135(22): 3655-3664.

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